

ABSTRACT OF THE DISCLOSURE

A method and system for the fair allocation of unused guaranteed bandwidth. Data segments of at least one class of service are received at each of a plurality of ingress line cards. Each class of service has a guaranteed percentage of transmission bandwidth. The system uses a must-serve bit to mark a number of data cells within each class of service. The number of cells marked depends on the guaranteed bandwidth percentage for the particular class of service. The mark is referred to as "must-serve" since the scheduler must serve the particular class of service to the extent of the marked cells in order to meet the guaranteed bandwidth. The generic switch fabric monitors the cells and the switch CPU reallocates bandwidth so that only the marked cells are provided preferential transmission. Non-marked cells compete equally for excess bandwidth.